REMARKS

This Amendment, submitted in response to the Office Action dated March 4, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-26 are now pending in the present application.

I. Specification

The Examiner objected to the Abstract stating that the abstract is too long. Applicant has amended the Abstract as indicated in the Appendix. Consequently, Applicant requests that the objection to the Abstract be withdrawn.

II. Claim Objections

The Examiner objected to claim 4 for containing some informalities. Applicant has amended claim 4 as suggested by the Examiner. Therefore, Applicant requests that the objection to claim 4 be withdrawn.

III. Claim Rejections under 35 U.S.C. § 103

Claims 1-22 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirawa (U.S. Patent No. 6,816,634) in view of Sakaue et al. (U.S. Patent No. 6,025,586).

Claim 1 recites "the imaging element group generating a group of image pixels at the imaging surface in a two-dimensional arrangement which is inclined, as a whole, at a predetermined inclination angle with respect to the scanning direction." The Examiner cites col.

2, lines 21-55 and col. 6, line 11 to col. 7, lines 27 of Hirawa for teaching this aspect of the claim. The respective column and lines cited by the Examiner discloses an image recorder for recording an input image on an image recording medium along scanning lines inclined with respect to a main scanning direction, by using a continuous scanning system for performing a continuous scan in both the main scanning and sub-scanning direction. Further, Hirawa discloses a one-dimensional array of units E of a spatial light modulator 24 can be projected onto an imaging plate 11. The modulator 24 consists of 8 units E1 to E8 which correspond with pixels D1 to D8 in the input image M. Pixel units P1 and P2 in the output image ME are in correspondence with pixel D1 in the input image and pixel units P3 and P4 are in correspondence with pixel D2.

However, there is no indication that the imaging elements (E1 to E8 as cited by the Examiner) generate a group of image pixels at an imaging surface which is inclined as a whole at a predetermined inclination angle, as recited in claim 1. To the extent Hirawa compensates for a difference in a read angle θ_r and write angle θ_w, the angular difference can be attributed to a scan line inclination caused by simultaneous movement in main-scan and sub-scan directions. Therefore, contrary to the Examiner's contention, Hirawa does not teach a recording head with imaging elements inclined in a direction relative to a main scan direction.

Claim 1 further recites "an alteration section which, on the basis of a difference between the predetermined inclination angle of the imaging element group and an actual inclination angle of the image pixel group, *alters a number of image pixels* that are employed *in a direction which is inclined* from the scanning direction by the actual inclination angle." The Examiner cites

image signal processor 44 for teaching the claimed alteration section. Further, the Examiner states that the image signal processor 44 includes buffer memories BM1-3 which alters a group of pixels, citing col. 8, line 5- col. 10, lines 12.

The respective column and lines cited by the Examiner discloses that buffer memories BM1, BM2, and BM3 have storage areas each corresponding to a scanning line. The converter 47A converts pixels D in the input image M which are read out from the buffer memories into pixel units P in the output image ME. A resolution converter 48A of the converter 47A converts pixels D read out from the buffer memories into pixel units P to suit the resolution of the output image ME. A barrel shifter 49A performs a shift operation to shift and output the position of each input signal.

Further, in a first correction operation, an angle difference between a write angle and a read angle is set to be equal to an inclination angle of scanning lines with respect to a main scanning direction. However, there is no indication that a number of image pixels is altered.

The Examiner concedes that Hirawa does not disclose that the imaging elements are two-dimensionally arranged, and cites Sakaue to cure the deficiency. Sakaue relates to controlling a linear arrangement of elements to provide two-dimensional information. Col. 6, lines 40-50. Sakaue discloses forming an inclined line pattern by the operation of setting the pulse reference positions from which the pulses are driven, in regular positions in pixels in accordance with two-dimensional information of the pixels of the image and regularly giving a pixel value to the pixel next to the pixel or taking the value of the adjacent pixel in accordance with the two-dimensional

information. See col. 6, lines 41-49. Sakaue Figs. 14A and 14B discloses two-pixel modulation and three-pixel modulation. Figs. 15A and 15B of Sakaue show the two-dimensional position of the processed pixel and the pixel shifting value calculation for forming the line pattern having a two-pixel period. Figs. 16A and 16B show the relationship between the two-dimensional position of the processed pixel, types of the pixel shifting value calculations, and the reference position, for generating the line pattern with three-pixel period.

However, Sakaue does not disclose that the imaging elements are two-dimensionally arranged or that the imaging element group generates a group of image pixels at the imaging surface in a two-dimensional arrangement, as further recited in claim 1.

Moreover, assuming *arguendo*, that Sakaue taught the features of a two-dimensional imaging element, modifying Hirawa to include two-dimensional imaging elements would result in a substantial modification of the principle of operation of Hirawa evidencing that the Examiner's reasoning is merely a result of hindsight. In particular, modifying Hirawa to include the purported two-dimensional element of Sakaue would be contrary or require a fundamental redesign to the calculation of an inclination angle based on a line unit as taught in Hirawa.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable.

IV. New Claims

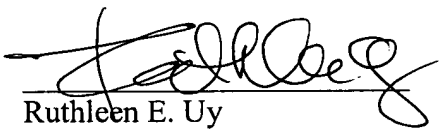
Applicant has added claims 23-26 to provide a more varied scope of protection. Claims 23-26 should be deemed allowable by virtue of their dependency to claim 1 for the reasons set forth above.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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